



Dear City Resident,

September 28, 2004

The City of Rockville wants your input to help protect and restore water quality in the Watts Branch stream system. The City's Department of Public Works is investigating approaches for **Low Impact StormWater Management (LISWM)** – these are options that property owners can use to supplement traditional large-scale stormwater measures. When rain falls on compacted earth or hard surfaces like rooftops and streets, the water washes off at a faster rate than it does on forested, undeveloped areas. It also contains contaminants picked up from those surfaces, like fertilizers, dirt and oil. A LISWM approach reduces the amount of rainfall runoff and pollutants because it traps and treats stormwater before it reach the storm drain system or stream. LISWM techniques include rain barrels, rain gardens and pet waste collection stations. These approaches are much more effective with extensive participation by the community.

Over the next year, the College Gardens neighborhood will try out 'demonstration projects' of LISWM. This survey has been mailed to all households in that community, but we want to hear from other neighborhoods as well. We expect to use what we learn from College Gardens throughout the city over the next several years. To identify which approaches would be most useful, we need to find out about your 'watershed patterns' – things you do now that affect local stream quality and what you are willing to try. The attached survey identifies common household activities or situations that may be improved by LISWM techniques. The survey should take about 10 minutes to complete. Your responses will help guide the City and your community in selecting techniques that will help you and the environment.

The survey results will be anonymous and confidential. You may choose to provide your name and address on a voluntary basis if you wish to receive updates on this study. The City will not use the survey results for Property Code enforcement or action. We do need identification of your street name and your type of property, so we can evaluate placement of different measures, but we don't have to know your house number.

Your responses will help us tailor LISWM to your area, and will also help us measure our improvements over the next decade. If you have any questions about the survey, please contact Lise Soukup at the City of Rockville (Phone: 240-314-8515 or E-Mail: lsoukup@rockvillemd.gov)

Thank you for taking the time to complete the survey. Please complete the survey by Monday, October 15. You can also download the survey on the City's website at www.rockvillemd.gov Mail your response to: Lise Soukup, Department of Public Works, Rockville City Hall, 111 Maryland Ave., Rockville, MD 20850-2364, or drop it off either at City Hall's DPW Counter or the Rockville Senior Center's front desk (1150 Carnation Drive) between now and Oct 16.

Sincerely,

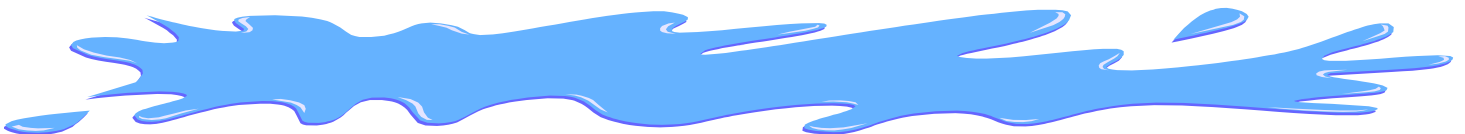
Lise Soukup, Civil Engineer II, Department of Public Works

BEFORE YOU TAKE THE SURVEY...

WHAT IS LOW IMPACT STORMWATER MANAGEMENT???

LISWM = Low Impact Stormwater Management

- **LISWM** treats runoff before it reaches the storm drainpipes or streams. It allows the water to soak into the ground or be used by trees and plants instead of running off the site.
- **LISWM** can be features built into your yard or garden, methods of reducing the amount of pollutants exposed to rainfall, or ways to use storm runoff in place of water from your tap.
- **LISWM** techniques collect runoff from small areas such as driveways, yards or rooftops. They can be used in parks, on public streets, in parking lots, and even at private homes.
- **LISWM** traps pollutants before they enter the storm drain system and streams. It helps to reduce stream erosion and improve stream quality for fish and insects.
- **LISWM** does not need a lot of maintenance. However, it needs to be properly installed and kept in good condition in order to work.
- **LISWM** on private lots belong to the property Owner and become the responsibility of that Owner. The City will not take over your land, will not put legal restrictions on the features such as easements, and will not maintain them for you.
- **LISWM** is optional. The current or future Owner has the right to dismantle or remove a private LISWM feature on his/her property. The Owner is responsible for the cost of doing this, and may have to restore the drainage system to the original state.
- **LISWM** can save an Owner money. It lowers maintenance costs, reduces labor, saves on water for irrigation, and provides native trees; shrubs and perennial flowers that come back each year and don't need to be replaced regularly like annual flowers.
- **LISWM** is great for people who want a yard that is attractive, unique, safe for kids and pets, attracts birds and butterflies, and is easy to care for!



RESIDENTIAL SURVEY ON LOW IMPACT STORMWATER MANAGEMENT TECHNIQUES

First, provide the name of your street. Then list the nearest intersection or cross street. This helps us to know where 'watershed behaviors' occur within the neighborhood.

STREET NAME: _____

NEAREST INTERSECTION: _____

Check the type of building that best describes your residence or property in this community.

____ Single Family Detached House ____ Town house ____ Apartment ____ Non-residential

In this community, are you an: ____ Owner? ____ Renter? ____ Property Manager?

*It is **OPTIONAL** to provide your name, email and complete mailing address. Fill this in to receive study updates.*

Name: _____

Email: _____

Address: _____

***THIS IS NOT A TEST! JUST TRY TO ANSWER THE QUESTIONS
TO THE BEST OF YOUR ABILITY.***

This survey assesses household activities most likely to affect local stream quality. It asks about things you do involving 1) lawn care, 2) garden care, 3) pet waste cleanup, 4) vehicle maintenance, 5) household hazardous waste, and 6) water management. The survey results will be used to develop a list of low impact stormwater management techniques that address the most common watershed behaviors in your neighborhood.

***** PLEASE *****

ONLY SEND IN ONE SURVEY PER HOUSEHOLD!!!

*PLEASE SELECT THE PERSON IN THE HOUSEHOLD THAT IS RESPONSIBLE FOR,
OR WHO IS MOST KNOWLEDGEABLE ABOUT YOUR ACTIVITIES IN THE SIX
SURVEY CATEGORIES TO COMPLETE THE SURVEY.*

RESIDENTIAL SURVEY ON LOW IMPACT STORMWATER MANAGEMENT TECHNIQUES

I. Lawn Care

1. Do you have a lawn or a yard with grass that needs mowing?
☐ Yes
☐ No (**GO TO SECTION II**)
2. Who mows and maintains your grass?
☐ You or some other member of your household
☐ Neighbor or other person
☐ A lawn care company (**GO TO QUESTION 7**)
3. Do you, or someone else fertilize your grass?
☐ Yes
☐ No (**GO TO QUESTION 10**)
☐ Don't Know
4. What information do you use to decide how much fertilizer to apply?

<input type="checkbox"/> Advice from government agency	<input type="checkbox"/> Product labels
<input type="checkbox"/> Friends/neighbors/family	<input type="checkbox"/> Lawn care company
<input type="checkbox"/> Decide on own	<input type="checkbox"/> Garden or lawn care center
<input type="checkbox"/> Other (PLEASE SPECIFY) _____	
5. What size bag of fertilizer do you use?
☐ Small (approx. 15 or 16 lb.)
☐ Large (approx. 45 – 55 lb.)
☐ Other (PLEASE SPECIFY) _____
6. How much fertilizer do you use *each* time you fertilize your lawn and yard?
☐ Less than ½ bag
☐ ½ bag
☐ 1 bag
☐ 2 bags
☐ Other (PLEASE SPECIFY) _____
7. If you use a lawn care company, what services are provided by that company in the last year? **CHECK ALL THAT APPLY**

<input type="checkbox"/> Mowing	<input type="checkbox"/> Lawn fertilizer
<input type="checkbox"/> Weed control	<input type="checkbox"/> Insect/disease control (pesticides/herbicides)
<input type="checkbox"/> Tree and shrub care	<input type="checkbox"/> Soil test
<input type="checkbox"/> Other (PLEASE SPECIFY) _____	
8. How many times a year is your lawn fertilized?
☐ 1
☐ 2
☐ 3
☐ 4
☐ Don't know
☐ Other (PLEASE SPECIFY) _____



RESIDENTIAL SURVEY ON LOW IMPACT STORMWATER MANAGEMENT TECHNIQUES

9. When is your lawn fertilized? **CHECK ALL THAT APPLY**
- | | |
|---|--|
| <input type="checkbox"/> Early Spring (Feb. through Mar.) | <input type="checkbox"/> Late Spring (Apr. through June) |
| <input type="checkbox"/> Early Fall (Sept. through Oct.) | <input type="checkbox"/> Late Fall (November) |
| <input type="checkbox"/> Winter | <input type="checkbox"/> Summer |
| <input type="checkbox"/> Don't know | |
10. Have you applied pesticides or weed killer to your yard in the last year?
- ☐ Yes – it is included in my fertilizer or grass seed mix
- ☐ Yes – it is a separate product from fertilizer or seed mix
- ☐ No (**GO TO QUESTION 12**)
- ☐ Don't Know
11. How do you decide how much pesticide or herbicide to apply?
- | | |
|--|--|
| <input type="checkbox"/> Advice from government agency | <input type="checkbox"/> Product labels & directions |
| <input type="checkbox"/> Friends/neighbors/family | <input type="checkbox"/> Lawn care company |
| <input type="checkbox"/> Garden or lawn care center | <input type="checkbox"/> Decide on own |
| <input type="checkbox"/> Other (PLEASE SPECIFY) _____ | |
12. Have you had a soil test on your lawn in the past three years? *(Soil tests kits are available at minimal charge to measure nutrient levels in your soil and guide you in choosing the right amount of fertilizers.)*
- ☐ Yes
- ☐ No
- ☐ Don't Know
13. Please select the statement that best reflects your opinion. *(A soil test kit uses a mixture of soils from all the areas of your lawn or your garden. One kit will tell you the average condition for an entire yard. Some people prefer to do separate tests for the front vs. back yards, or for lawn areas vs. gardens.)*
- ☐ I would have my soil tested from the lawn if I collected the sample and the testing was free.
- ☐ I would have my soil tested from the lawn if I collected the sample and it cost \$5 or less for the sample to be tested.
- ☐ I would have my soil tested from the lawn if I collected the sample and it cost \$5 – \$10 for the sample to be tested.
- ☐ I would only have my soil tested from the lawn if it was free AND somebody else collected the sample and explained the results to me.
- ☐ I don't want my soil tested from the lawn
- ☐ I already use soil testing for my yard.
14. When you, someone else or a lawn care company cuts your lawn, are the grass clippings:
- ☐ Left on the lawn?
- ☐ Bagged and put out for recycling/trash pickup?
- ☐ Mulched in place (i.e., chopped up by the mower and left to decompose in place)?
- ☐ Composted on your property?
- ☐ Other? (PLEASE SPECIFY) _____



RESIDENTIAL SURVEY ON LOW IMPACT STORMWATER MANAGEMENT TECHNIQUES

15. How do you, someone else, or a lawn care company dispose of leaf litter?

- ☐ Don't collect leaves - they remain on the yard
- ☐ Mulched or used in garden beds on your property
- ☐ Composted on your property
- ☐ Leave at curbside for City to pickup
- ☐ Other (PLEASE SPECIFY) _____



II. Garden Care

1. Do you have garden areas (for flowers, vegetables, etc.)?

- ☐ Yes
- ☐ No
- ☐ Don't Know



2. What products do you or others apply to your garden?

(CHECK ALL THAT APPLY)

- ☐ Water ☐ Fertilizer
- ☐ Compost ☐ Pesticide
- ☐ Herbicide ☐ Other (PLEASE SPECIFY) _____

3. Please rank your level of interest to create a rain garden – a garden that would receive water draining from your downspouts. (More information on rain gardens is given on the last page of the survey.)

- ☐ Very interested
- ☐ Interested
- ☐ Not interested
- ☐ Undecided
- ☐ Would like more information



Example of a raingarden.

III. Pet Waste

1. How many dogs do you have in your household?

- ☐ None ☐ 1
- ☐ 2 ☐ 3 or more

2. Where does your dog frequently “do his business”?

- ☐ My yard
- ☐ On walks along the street
- ☐ On walks through natural parks (such as the Watts Branch Stream Valley Park)
- ☐ On walks in community areas (such as College Gardens Park, College Gardens Elementary School, Montgomery College, or other open areas)
- ☐ Don't know – I just let my dog out by himself!

RESIDENTIAL SURVEY ON LOW IMPACT STORMWATER MANAGEMENT TECHNIQUES

3. How frequently do you clean up after your dog?
- | | |
|--|---|
| <input type="checkbox"/> Never | <input type="checkbox"/> Rarely |
| <input type="checkbox"/> Occasionally | <input type="checkbox"/> Most of the time |
| <input type="checkbox"/> All of the time | |
4. How do you dispose of the pet waste?
- | |
|--|
| <input type="checkbox"/> Throw in trashcan at home |
| <input type="checkbox"/> Throw in anybody else's trashcan but mine (at public areas, along the walk, etc.) |
| <input type="checkbox"/> Throw it into the nearest woods, park or other common area |
| <input type="checkbox"/> Throw it into the nearest storm drain or stream |
| <input type="checkbox"/> Leave it to "decompose naturally" in the open |
5. Would you use "doggie pit stops" (clean-up stations supplied with bags and trash cans or underground disposal systems) if they were provided in public areas?
- | | | |
|------------------------------|-----------------------------|-------------------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Don't know |
|------------------------------|-----------------------------|-------------------------------------|
6. Where in the neighborhood would you like to see doggie pit stops?
- _____
7. Would you consider using an underground system in your own yard that biologically breaks down dog waste and safely infiltrates into the soil?
- | | | |
|------------------------------|-----------------------------|-------------------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Don't know |
|------------------------------|-----------------------------|-------------------------------------|



IV. Vehicle Maintenance

1. What type of vehicles do you own, park and/or store on your property? **CHECK ALL THAT APPLY**
- | |
|---|
| <input type="checkbox"/> Personal car, van, SUV or truck for everyday use |
| <input type="checkbox"/> Camper or RV |
| <input type="checkbox"/> Boat |
| <input type="checkbox"/> ATV |
| <input type="checkbox"/> Commercial vehicle |
2. On average, how often do you or anyone else wash a car or other vehicle on your property during warm weather? (If you wash multiple vehicles, then count all of these times.)
- | | |
|---|---|
| <input type="checkbox"/> Never or hardly ever | <input type="checkbox"/> 1-4 times a year |
| <input type="checkbox"/> Monthly | <input type="checkbox"/> Every other week |
| <input type="checkbox"/> Once a week or more | |
3. Do you or anyone else perform any vehicle maintenance on your property? **CHECK ALL THAT APPLY**
- | | |
|---|--|
| <input type="checkbox"/> Oil change | <input type="checkbox"/> Change tires |
| <input type="checkbox"/> Clean or change brake pads | <input type="checkbox"/> Replace or "top-off" fluids |
| <input type="checkbox"/> Other (Please list) _____ | |



RESIDENTIAL SURVEY ON LOW IMPACT STORMWATER MANAGEMENT TECHNIQUES

V. Hazardous Household Products

1. Do you have any of these products on your property?
 - ☐ Oil-based paint
 - ☐ Paint thinner, strippers, other flammable liquids
 - ☐ Pesticides/weed killers
 - ☐ Fertilizers/lawn care products
 - ☐ Swimming pool chemicals
 - ☐ Antifreeze, gasoline, used motor oil
 - ☐ Batteries
 - ☐ Tires
2. Where do you store these types of household products in your house? **CHECK ALL THAT APPLY**
 - ☐ Garage/carport
 - ☐ Outside shed/porch (i.e., under a roof)
 - ☐ Outside on patio, driveway or other paved surface
 - ☐ Basement
 - ☐ Other _____
 - ☐ Don't know
 - ☐ Not applicable (don't have any hazardous household products)
3. Are all products currently stored in containers that protect against spillage or leaking? (Remember that original containers can decay over time and start to leak.)
 - ☐ Yes
 - ☐ No
 - ☐ I have not checked them to see if they're leaking
4. How do you get rid of hazardous products? **CHECK ALL THAT APPLY AND LIST THE PRODUCTS BY EACH ANSWER**
 - ☐ Throw out in trash
 - ☐ Leave for pickup by City of Rockville hazardous household waste collection
 - ☐ Dump down sink or toilet
 - ☐ Pour down storm drain inlet or in street gutter
 - ☐ Take to County Waste Transfer Station on Rte. 355/Shady Grove Road
 - ☐ We never throw anything out



VI. Water Management

1. What outdoor uses for water do you or others in your household have? **CHECK ALL THAT APPLY**
 - ☐ Watering the lawn or other grassed areas
 - ☐ Watering your garden, shrubs or trees
 - ☐ Washing the car(s) or other vehicles
 - ☐ Washing the dog(s)



RESIDENTIAL SURVEY ON LOW IMPACT STORMWATER MANAGEMENT TECHNIQUES

- ☐ Water fights for kids
 - ☐ Cleaning the sidewalk or driveway
 - ☐ Filling a swimming pool or wading pool
 - ☐ Other (PLEASE SPECIFY) _____
2. Do you water your lawn and/or garden areas with a:
- ☐ Portable sprinkler
 - ☐ Installed sprinkler system
 - ☐ Garden hose
 - ☐ Soaker hose (also called a drip hose or trickle hose)
 - ☐ Other (PLEASE SPECIFY) _____
 - ☐ Don't water the lawn or yard
3. Where does the water from your roof downspouts go? You have several downspouts that may be located along the sides of your house, in the front and back, and/or next to a garage or carport. Look at where these pipes end. **(CHECK ALL THAT APPLY)**
- ☐ Connected to a storm drain pipe off my property
 - ☐ Underground, but the pipe comes out somewhere in my yard
 - ☐ Pavement (onto driveway, sidewalk, patio)
 - ☐ Lawn
 - ☐ Garden or wooded area
 - ☐ Rain barrel
 - ☐ Don't know
 - ☐ Other _____
- Downspouts that go into the ground as shown are connected to an underground pipe. This pipe may end somewhere on your property, run under the sidewalk and empty into the street gutter or may lead to the storm drain system.***
-
4. Would you consider disconnecting the downspout(s)? *When a downspout is disconnected properly, runoff is directed to areas on the lawn or garden that allow the rainwater to soak into the ground.*
- ☐ Yes
 - ☐ No
 - ☐ Undecided or have concerns and questions



A rain barrel collects and stores rainwater from your rooftop to use later for watering lawns and gardens. A drip irrigation system can be easily installed.

A rain garden receives rooftop rainwater by redirecting the downspout to a shallow depression in the yard planted with flowers and shrubs.



Benefits include:

- Reduce the amount of stormwater entering the storm drain
- Reduce pollutants reaching the stream
- Lower water costs
- Rain gardens allow 30% more water to infiltrate into the ground than a conventional lawn.
- Provide beautification to your yard.

THANK YOU FOR COMPLETING THE SURVEY.